



**EMSOS Study:  
Total Femur Replacement: Functional Outcome, Clinical Results and Gait Analysis**

October 24, 2022

**Invitation to participate**

Dear colleagues,

hereby we invite you to participate in the multicentric retrospective study "Total Femur Replacement: Functional Outcome, Clinical Results and Gait Analysis".

Total femur replacements (TFR) are very rare. This limb saving surgery includes not only replacement of the whole bone, but also reconstruction of the proximal and distal joint. Soft tissue reconstruction for joint stability and muscles attachment also adds complexity of this operation. Focus of the few publications on TFR was analyzing the postoperative complications' rates and types, as well as the functional and (in the oncological cases) oncological outcomes. To our knowledge, there is no literature regarding further specific functional analysis including gait analysis for patients who underwent a total femur replacement. Due to patients' higher demand for a good functional outcome, and a better oncological outcome, we believe there is a need for a detailed analysis of functional and clinical outcome as well as gait analysis in patients who received this megaprosthesis.

From a scientific as well as clinical practical point of view, there is a high need for a larger data in order to draw conclusions. The idea of this study is to analyze clinical (performance, range of motion...), oncological (local recurrence, survival...) and surgical (infection rate, surgical complications...) outcome of total femur replacement for oncological or non-oncological indications. A competing risk and event analysis of the prostheses survival is planned. Additionally, gait analysis will provide further insight about functional performance of hip and knee joint and nearby muscles.

After data collection and analysis, we plan to publish the results in one of the orthopedic top journals. All participating centers will be included in authorship.

Please send us your kind response on e-mail address: [marisa.valentini@medunigraz.at](mailto:marisa.valentini@medunigraz.at)

Looking forward to hearing from you!

Sincerely

Dr. Marisa Valentini, Dr. Marko Bergovec and Prof. Andreas Leithner